

**Australian/New Zealand
Certification Scheme for
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT
ANZEx Scheme**

Certificate of Conformity

Certificate No.: ANZEx 06.3014X	Issue No.: 0	Date of Issue: 2006-06-26
	Issue No.: 6	Date of Issue: 2016-02-11

Applicant: Mine Safety Appliances Company, LLC
1000 Cranberry Woods Drive
Cranberry Township PA 16066
United States of America

Electrical Apparatus: Altair Pro Portable Single Gas Detector

Type of Protection: Ex ia

Marking Code: Ex ia IIC T4 (Ta = 50 °C)

Manufacturer: Mine Safety Appliances Company, LLC
1000 Cranberry Woods Drive
Cranberry Township PA 16066
United States of America

Manufacturing Location(s): As above

The EPEE certification database located at <http://www.anzex.com.au> shows the validity of this Certificate.

This certificate and schedule shall not be reproduced except in full

 Test Safe A U S T R A L I A	<p>Certificate issued by:</p> <p><i>TestSafe Australia</i></p> <p>919 Londonderry Road, Londonderry NSW 2753 Australia</p> <p>Phone: +61 2 4724 4900 Fax: +61 2 4724 4999</p> <p>http://www.testsafe.com.au</p>	 JAS-ANZ www.jas-anz.org/register
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This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication MP87.1:2008.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

- IEC 60079-0:2011** Explosive atmospheres – Part 0: Equipment – General requirements
- IEC 60079-11:2011** Explosive gas atmospheres – Part 11: Equipment protection by intrinsic safety ‘i’

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standard(s) listed above.*

ASSESSMENT & TEST REPORTS:

The equipment listed has successfully met the assessment and test requirements as recorded in:

Test Report No. and Issuing Body: **35308, TestSafe Australia**
Quality Assessment Report No. and Issuing Body: **FR/INE/QAR08.0011/05, Ineris**

File Reference: **2015/004372**



Ujen Singh

Signed for and on behalf of issuing body

Quality & Certification Manager

Position

11 February 2016

Date of Issue

This certificate is not transferable and remains the property of the issuing body and must be returned in the event of it being revoked or not renewed.

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Schedule

EQUIPMENT:

The “Altair Pro” portable single gas detector is initially available in three gas models e.g. O₂, CO and H₂S. The O₂ model is called “Altair Pro O₂”. The gas sensing cells are of the electro-chemical type. The instrument is powered by a replaceable CR2 lithium cell. The LCD display panel on the front displays an indication of the level of the detected gas. A push button allows users to select the information viewed on the LCD display. Audible and visual alarm indicators are located on the front of the apparatus, and an imbalanced motor produces an optional vibration alert when in alarm mode.

CONDITIONS OF CERTIFICATION:

It is a condition of safe use that the lithium batteries of Panasonic CR-2PA/1B, Energizer CR2 EL1CR2BP, Varta CR2 6206 and Varta (Power One) CR2 CR15H270, 6206 shall be used in the apparatus.

DOCUMENTS:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	1 of 7	Altair Pro <i>Marking Details</i>	00	2006-06-16
SK3098-1014	2 of 7	Altair Pro <i>Assembly Details</i>	00	2006-06-16
SK3098-1014	3 of 7	Schematic, <i>Single Gas, Altair Pro</i>	00	2006-06-16
SK3098-1014 sheet	4 of 7	Altair Pro <i>Parts List</i>	00	2006-06-16
SK3098-1014 & attachment B,	5 of 7 & 10 sheets	PCB Artwork, (<i>Altair Pro PCB</i>) (ref. 10073836)	00	2006-06-16
SK3098-1014 & attachment C,	5 of 7 & 10 sheets	PCB Artwork, (<i>Altair Pro O2 PCB</i>) (ref. 10066405)	00	2006-06-16
SK3098-1014	6 of 7	Special Component Requirements	00	2006-06-16
SK3098-1014	7 of 7	Altair Pro Overview	00	2006-06-16

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Schedule of Variations

Variations Permitted by Issue 1:

- A new model “Altair Pro-R O2” Remote Oxygen Detector has been added. The “Altair Pro-R O2” remote oxygen detector is identical to the model “Altair Pro O₂”. The “Altair Pro-R O2” remote oxygen detector has a jack socket on the front panel where a remote oxygen detecting electrochemical cell is connected.

Altair Pro-R O2 Remote Oxygen Detector has been assessed in Test Report 28538.

Condition of Certification Relating to Issue 1:

1. It is a condition of safe use that the maximum length of the remote sensor connecting cable in the “Altair Pro-R O2” does not exceed 3.3 metres (10 feet).
2. All previous conditions are still applicable.

Drawings Relating to Issue 1:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	1 of 9	Altair Pro <i>Marking Details</i>	01	2006-12-14
SK3098-1014	2 of 9	Altair Pro <i>Assembly Details</i>	01	2006-12-14
SK3098-1014	3 of 9	Schematic, <i>Single Gas, Altair Pro</i>	01	2006-12-14
SK3098-1014	4 of 9	Altair Pro <i>Parts List</i>	01	2006-12-14
SK3098-1014 & attachment	5 of 9 7 sheets	PCB Artwork, (<i>Altair Pro PCB</i>) (ref. 10075555)	01	2006-12-14
SK3098-1014	6, 7 of 9	Special Component Requirements	01	2006-12-14
SK3098-1014	8 of 9	Altair Pro Overview	01	2006-12-14
SK3098-1014	9 of 9	Revision History	01	2006-12-14

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Variations Permitted by Issue 2:

- Adding an alternate case overmould material RTP 2099E X 118617 B (Black) to the apparatus.

This change has been assessed in Test Report 30309.

Condition of Certification Relating to Issue 2:

1. The previous conditions are still applicable.

Drawings Relating to Issue 2:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	6 of 9	Special Component Requirements	2	2008-05-06

Variations Permitted by Issue 3:

- Capacitors C13, C14, C22 (0.1 µF 10% each) were added to the Altair Pro microcontroller reset circuit.
- Capacitors C18, C19, C20 (0.1 µF 10% each) were added to the Altair Pro O2 microcontroller reset circuit.
- An additional Transient Voltage Suppressor was added to the Altair Pro-R O2 version.
- Added alternate static dissipative overmould material RTP2099 EX 118617 B (various colour) to the apparatus.

This change has been assessed in Test Report 30856.

Condition of Certification Relating to Issue 3:

The previous conditions are still applicable.

Drawings Relating to Issue 3:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	9	Altair Pro_TestSafe	3	2008-11-06

Variations Permitted by Issue 4:

- The QAR Issuer was changed from CSA to Ineris.

Condition of Certification Relating to Issue 4:

The previous conditions are still applicable.

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Variations Permitted by Issue 5:

1. The IR Transceiver (component designator U2) Sharp GP2W0110YP0F is being replaced by a similar device Vishay TFBS4650.
2. Associated capacitor C8 decreased in nominal capacitance from 1.0 μ F to 0.1 μ F.
3. Protective resistor R3 previously 39.2 Ω , \pm 1% tolerance, 0.5 W rating, has changed to 100 Ω , \pm 1% tolerance, 0.5 W rating.

This change has been assessed in Test Report 33788.

Condition of Certification Relating to Issue 5:

The previous conditions are still applicable.

Drawings Relating to Issue 5:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	28	Altair Pro TestSafe	4	2012-05-18

Variations Permitted by Issue 6:

The applicant and manufacturer name was changed from Mine Safety Appliances Co. to Mine Safety Appliances Company, LLC.

Updated standards to IEC 60079-0:2011 and IEC 60079-11:2011.

This change has been assessed in Test Report 35308.

Condition of Certification Relating to Issue 6:

The previous conditions are still applicable.

Drawings Relating to Issue 6:

Drawing/Document No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
SK3098-1014	28	Altair Pro TestSafe	4	2012-05-18
10069170	3	Label, Approval, Altair Pro	6	2015-02-27
10074734	47	Altair Pro Single Gas Detector Operating Manual	3	-

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